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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,470	09/28/1999	JEFFREY P. KUBALA	PO9-99-159	4085

7590 02/19/2003

BLANCHE E SCHILLER ESQ
HESLIN & ROTHENBERG P C
5 COLUMBIA CIRCLE
ALBANY, NY 12203

EXAMINER

OPIE, GEORGE L

ART UNIT PAPER NUMBER

2126

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/408,470

Examiner

George L. Opie

Applicant(s)

Kubala et al.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) Responsive to communication(s) filed on .
- 2a) This action is **FINAL**. 2b) x This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) x Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) is/are withdrawn from consideration.
- 5) Claim(s) is/are allowed.
- 6) x Claim(s) 1-65 is/are rejected.
- 7) Claim(s) is/are objected to.
- 8) Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) All b) Some * c) None of the CERTIFIED copies of the priority documents have been:
1. received.
2. received in Application No. (Series Code / Serial Number) .
3. received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) x Notice of References Cited (PTO-892)
- 15) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) xx Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 6 .
- 17) Interview Summary (PTO-413) Paper No(s) .
- 18) Notice of Informal Patent Application (PTO-152)
- 19) x Other: Text Doc for USP5,301,323

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DETAILED ACTION

1. Request for copy of Applicant's response on floppy disk:
Please help expedite the prosecution of this application by including, along with your amendment response in paper form, an electronic file copy in WordPerfect, Microsoft Word, or in ASCII text format on a 3½ inch IBM format floppy disk. Please include all pending claims along with your responsive remarks. Only the paper copy will be entered -- your floppy disk file will be considered a duplicate copy. Signatures are not required on the disk copy. The floppy disk copy is not mandatory, however, it will help expedite the processing of your application. Your cooperation is appreciated.
2. The U.S. Patents used in the art rejections below have been provided as text documents which correspond to the U.S. Patents. The relevant portions of the text documents are cited according to page and line numbers in the art rejections below. For the convenience of Applicant, the cited sections are highlighted in the *text documents*. Consistent with Office procedure, the U.S. Patents corresponding to the *text documents* are also included with this action.
3. Claim Rejections - 35 U.S.C. § 103
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-65 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Admitted Prior Art (APA) from THE background of THE application in view of Maeurer et al. (U.S. Patent 5,301,323).

As to claim 1, the APA teaches a method of managing workload of a computing environment (moving work to the physical resources of the system) said method comprising:

managing workload across two or more partitions of a plurality of partitions of said computing environment (S/390 ... workload managers are used to manage the workload within and among the partitions)

The APA does not explicitly disclose the additional limitations detailed below.

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Maeurer teaches dynamically adjusting allocation of a shareable resource (dynamically ... changing I/O configuration, p3 40-57) of at least one partition (channel path, p5 21-54) of said two or more partitions (channel paths by which the associated device can be accessed, p4 15-52) wherein workload goals of said two or more partitions are being balanced (manage channel paths to I/O devices ... according to ... workload goals or system performance, p3 40-57).

It would have been obvious to combine Maeurer's teachings with the APA because the dynamic reallocation/ reconfiguration of a device with respect to channel/partitions provides a flexibility for assigning resources responsive to system load conditions.

As to claim 2, Maeurer teaches the system will "automatically change the I/O configuration in accordance with changes in the workload" p3 40-57 which corresponds to the dynamically adjusting is performed transparently to work processing within said at one least one partition.

As to claim 3, it is well known that the CPU, I/O devices, network adaptors, channels or memory components commonly constitute sharable resources.

As to claim 4, Maeurer teaches "reconfiguration manipulates the channel utilizations in units ... of bandwidth ", p7 44-52 which corresponds to the moving at least a portion of said shareable resource from one partition to at least one other partition.

As to claim 5, Maeurer (p3 40-57) teaches "changing the I/O configuration . . . according to some set of priorities" which corresponds to the limitation of allocating a sharable resource based on priority.

As to claim 6, Maeurer teaches the resource (channel) "P0 is now shared by CU1 And CU4" p11 3-40, and from this it would have been obvious to provide assigning the shareable resource among two or more partitions based on percentage allocation.

As to claim 7, the APA teaches logical partitions as claimed.

As to claim 8, Maeurer (p3 40-57) teaches adjusting allocation of a plurality of shareable resources (measuring I/O workload and changing the I/O configuration while the system is operating).

As to claim 9, Maeurer (p4 15-32) teaches a dynamic I/O reconfiguration program (DI/OR 34) that corresponds to the workload manager for controlling the dynamic adjustment of resources in the computing environment.

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As to claims 10-12, Maeurer teaches the dynamic adjusting/reconfiguring by increasing or decreasing allocation of sharable bandwidth resources, p11 3-40.

As to claim 13, note the claim 1 discussion supra. The limitations in claim 13 are the same as claim 1 but for the fact that claim 13 has an additional limitation of the partitions concurrently share at least one shareable resource. Maeurer's teaching that a resource (channel) "P0 is now shared by CU1 And CU4" p11 3-40 meets the claimed limitation of the partitions concurrently share at least one shareable resource.

As to claim 14, see the claim 3 discussion supra.

As to claim 15, see Maeurer's p3 40-57 managing/balancing via "workload goals" discussed in the rejection of claim 1 supra.

As to claims 16-17, note the discussions of claims 10-11 above.

As to claims 18-21, see the discussions of claims 4-6 and 8 respectively.

As to claims 22-33, note the rejections of claims 1-12 above. Claims 22-33 are the same as claims 1-12, except claims 22-33 are apparatus claims and claims 1-12 are method claims.

As to claims 34-42, note the rejections of claims 13-21 above. Claims 34-42 are the same as claims 13-21, except claims 34-42 are apparatus claims and claims 13-21 are method claims.

As to claims 43-44, see the rejections of claims 22 and 34 respectively. Claims 43-44 are functionally equivalent to claims 22 and 34.

As to claims 45-56, note the rejections of claims 1-12 above. Claims 45-56 are the same as claims 1-12, except claims 45-56 are computer program product claims and claims 1-12 are method claims.

As to claims 57-65, note the rejections of claims 13-21 above. Claims 57-65 are the same as claims 13-21, except claims 57-65 are computer program product claims and claims 13-21 are method claims.

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5. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure. Each reference disclosed below is relevant to one or more of the Applicant's claimed invention.

U.S. Patent No. 5,996,026 to Onodera et al. which teaches resource allocation through time sharing and logically dividing the resources ;

U.S. Patent No. 5,898,870 to Okuda et al. which teaches the load sharing dynamically tuned by percentages of target resource usage;

U.S. Patent No 5,675,739 to Eilert et al. which teaches the reallocation/moving of resources based on system parameters.

Contact Information:

PTO Policy for Facsimile Submissions:

- ☐ AFTER-FINAL faxes must be signed and sent to (703) 746-7238.
- ☐ OFFICIAL faxes must be signed and sent to (703) 746-7239.
- ☐ NON OFFICIAL faxes should be sent to (703) 746-7240.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

- ☐ Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.

- ☐ Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at **(703) 305-9600**.

- ☐ Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Opie at (703) 308-9120 or via e-mail at *George.Opie@uspto.gov*. Internet e-mail should not be used where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the Applicant. Sensitive data includes confidential information related to patent applications.


ZARNI MAUNG
PRIMARY EXAMINER